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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,454	02/06/2004	Hajime Akimoto	NITT.0183	6722

7590 04/13/2007
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EXAMINER

KOVALICK, VINCENT E

ART UNIT PAPER NUMBER

2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/772,454

Applicant(s)

AKIMOTO ET AL.

Examiner

Vincent E. Kovalick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on applicant's amendment dated 2/2/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1,2,6,7 and 13 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 8-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Amendment dated February 2, 2007 in response to USPTO Office Action dated October 2, 2006.

The amendments to claims 1, 2 and 13 have been noted and entered in the record.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1-2, 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Pub. No US 2005/0219163) taken with Ito (Pub. No. US 2003/0174111).

Relative to claims 1 and 13, Smith et al **teaches** Display Driver Circuits for Organic Light Emitting Diode Displays (pg. 1, paras. 0001-0005); Smith et al. further **teaches** an image display device comprising: a pixel having a light emitting device which is driven to emit light on the basis of a display signal current; a display unit constructed by a plurality of said pixels arranged in a matrix; a signal line for passing said display signal current to said pixels; write pixel selecting means for selecting at least one row or column of said pixels to which said display signal current is to be passed via said signal line from said plurality of pixels; and display

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signal current generating means for generating said display signal current by performing a image data process on the basis of said stored data (pg. 5, para. 0054);

Smith et al. further still **teaches** storing means for storing data fetched from the outside (pg. 5, para. 0056).

Smith et al. **does not teach** said image display device wherein said write pixel selecting means further includes a function of simultaneously selecting N rows or columns of pixels, N is an integer equal to or greater than 2.

Ito **teaches** a Liquid Crystal Device and electro-optical device, driving circuit and drive method therefor (pgs. 1/2/3, paras. 0011-0024); Ito further **teaches** said image display device wherein said write pixel selecting means further includes a function of simultaneously selecting N rows or columns of pixels, N is an integer equal to or greater than 2 (Abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Smith et al. the feature as taught by Ito in order to facilitate being able to displaying the contents of a select groups of pixels.

Regarding claim 2, Ito further **teaches** said display device wherein the number N of pixels to be selected simultaneously by said write pixel selecting means is equal to or larger than 2 or equal to or smaller than the half of the pixels connected to said signal lines (Abstract).

Relative to claim 6, Smith et al. **teaches** said display device wherein said light emitting device is an organic light emitting diode provided in said pixel (pg. 5, para. 0054).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. taken with Ito as applied to claim 1 in item 3 hereinabove, and further in view of Yamada et al.

(Pub. No. US 2004/0016924).

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Regarding claim 7, Smith et al. taken with Ito **does not teach** said image display device wherein a driver circuit for driving said light emitting device is constructed by a polycrystalline Si-TFT (pg. 4, para. 0048 and Abstract).

Yamada et al. **teaches** top gate type thin film transistor (pgs. 1/2, paras. 0012-0019); Yamada et al. further **teaches** said image display device wherein a driver circuit for driving said light emitting device is constructed by a polycrystalline Si-TFT (pg.1 para. 0005).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Smith et al. taken with Ito the feature as taught by Yamada et al. in order to stay consistent with the economics of using a widely used material for the construction of said drive circuit.

Allowable Subject Matter

5. Claims 3-5 and 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 3, the major difference between the teachings of the prior art of record (Smith et al. (Pub. No US 2005/0219163) and Ito, (Pub/ No. 2004/0016924) and that of the instant invention is that said prior art of record **does not teach** the said image display device wherein said write pixel selecting means passes said display signal current N times to each of the pixels in one frame period, and each of said selected pixels illuminates on the basis of a current value of said display signal current of the last time of the N times.

Relative to claim 8, the major difference between the teachings of the said prior art of record

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and that of the instant invention is that said prior art of record **does not teach** the said image display device wherein polycrystalline silicon as the material of said polycrystalline Si-TFT is polycrystallized by being scanned with a laser beam having a major axis direction in a pulse form, and the major axis direction of said laser beam is almost parallel with an extending direction of said signal line.

Relative to claim 9, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** the said image display device wherein said pixel further includes: first switching means provided between one end of said organic light emitting diode and a first node; second switching means provided between said first node and said signal line; a drive TFT of said organic light emitting diode provided between said first node and a power source line; third switching means provided between a gate and drain of said drive TFT; and capacitance means provided between the gate and a source of said drive TFT.

6. Claim 12 is allowed.

7. The following is an examiner's statement of reasons for allowance:

Relative to claim 12, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** the said image display device comprising: a pixel having a light emitting device which is driven to emit light on the basis of a display signal current; a display unit constructed by a plurality of said pixels; a signal line for passing the display signal current to said pixels; write pixel selecting means for selecting a pixel to which said display signal current is to be passed via said signal line from said plurality of pixels; and display signal current generating means for generating said display signal

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current, wherein said light emitting device is an organic light emitting diode provided in said pixel, and first switching means provided between an anode electrode of said organic light emitting diode and a first node; second switching means provided between said first node and said signal line; a drive TFT of an n-type channel of said organic light emitting diode provided between said first node and a power source line; third switching means provided between a gate and a drain of said drive TFT; and capacitance means provided between the gate and a source of said drive TFT.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	6,577,302	Hunter et al.
Pub. No.	US 2005/0145891	Abe
Pub. No.	US 2005/0123265	Kimura
Pub. No.	US 2001/0026251	Hunter et al.

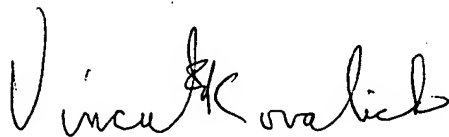
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To Respond

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E. Kovalick whose telephone number is 571-272-7669. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Vincent E. Kovalick
April 5, 2007



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